

APPARATUS FOR DELIVERING IONS FROM A GROUNDED  
ELECTROSPRAY ASSEMBLY TO A VACUUM CHAMBER

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ABSTRACT OF THE DISCLOSURE

The present invention relates to an apparatus for delivering ions to a vacuum chamber. The apparatus comprises an ionization chamber, an ionization region within the ionization chamber, a vacuum interface at a vacuum interface voltage and a vacuum chamber, wherein the ionization chamber communicates with the vacuum chamber through the vacuum interface. Sample is introduced into the ionization chamber from an electrospray assembly at approximately ground potential. Two electrodes are provided within the chamber such that three electric fields are generated, a first field extending from the electrospray assembly to the first electrode, a second field extending from the second electrode to the first electrode, and a third field extending from the second electrode to the vacuum interface. Ions are forced to travel through the fields in order before entering the vacuum chamber. In addition, the invention provides a method of delivering ions to a vacuum chamber.

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